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# KEGS5000

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## System Controller



# USER MANUAL

REV	DATE	REVISIONS
<b>1</b>	<b>October 2001</b>	Preliminary release.
<b>2 (A)</b>	<b>November 2001</b>	Added features, revised/added drawings.
<b>3 (B)</b>	<b>December 2001</b>	Added features. KEGS5000 firmware revision 01.02.XX
<b>C</b>	<b>October 2002</b>	KEGS5000 firmware revision 01.03.05 (PCN 982)

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**MANUFACTURER:** Ultrak<sup>®</sup>, Inc.

**DATE OF ISSUE:** December 22, 1995

**TYPE OF EQUIPMENT:** CCTV and Security Surveillance Equipment

**MODEL NUMBER:** Alarm Interface Unit  
AIU-100 - may be followed by any number of alphanumeric characters.  
Auxiliary Interface Units\*  
AIF-100/CO  
Central Control Unit  
CCU-100 - may be followed by any number of alphanumeric characters.  
CCU-150 - may be followed by any number of alphanumeric characters.  
CCU-200 - may be followed by any number of alphanumeric characters.  
Joystick Multiplexer  
MUX-100 - may be followed by any number of alphanumeric characters  
MUX-05 - may be followed by any number of alphanumeric characters  
Joystick Controller\*  
JPD-100, JPD-101, JPD-200 - may be followed by any number of alphanumeric characters.  
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SSI-100 - may be followed by any number of alphanumeric characters.  
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COE-08, COE-16 - may be followed by any number of alphanumeric characters  
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CRX-610/BX, CRX-801AX, CRX-801BX  
Control Transmitter\*  
UCT-10 - may be followed by any number of alphanumeric characters.  
UltraKey\*  
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Ethernet Subrack Controller  
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\*Standard EN60065 does not apply.

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**EN50081-1 Emissions Standard, and EN50082-1 Immunity Standard.**  
**EN55022** Radiated, Class A, **EN55022** Conducted, Class A, **IEC-1000-4-2**, ESD,  
**IEC-1000-4-3**, RF Fields, **IEC-1000-4-4**, Fast Transients/Burst.  
**EN60065** Safety Requirements for Audio, video and similar electronics apparatus.

Ultrak<sup>®</sup>, Inc. hereby declares that the models specified above conform to the directive and standard as specified.

Donald L. Stephenson  
Compliance Engineer  
517775-3

Rev. T

July 01, 2002

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## IMPORTANT SAFEGUARDS

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1. **READ AND FOLLOW INSTRUCTIONS** – All of the safety and operating instructions should be read before the appliance is operated and followed during installation and operation..
2. **RETAIN INSTRUCTIONS** – The safety and operating instructions should be retained for future reference.
3. **HEED WARNINGS** – All warnings on the product and in the operating instructions should be adhered to.
4. **CLEANING** – Unplug the unit from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning. See cleaning procedures under Maintenance.
5. **OBJECT AND LIQUID ENTRY** – Never push objects of any kind into this equipment as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
6. **ACCESSORIES** – Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury to a person and serious damage to the unit. Use only with a stand, tripod, bracket, or mount recommended by the manufacturer, or sold with the product. Any mounting of the unit should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
7. **WATER AND MOISTURE** – Do not use this product near water.
8. **POWER SOURCES** – This unit should be operated only from the type of power source indicated on the marking label.
9. **GROUNDING OR POLARIZATION** – This unit must be connected to a true Earth ground. This product is equipped with a 3-wire grounding type plug; a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
10. **OVERLOADING** – Do not overload outlets and extension cords as this can result in a risk of fire or electric shock.
11. **POWER CORD PROTECTION** – Power supply cords should be routed so they will not be walked on or pinched by items placed on or against them. Pay particular attention to the cord at the electrical outlet and the point where the plug connects to the product.
12. **SERVICING** – Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.  
**Caution:** Grounded wrist straps must be worn and proper ESD safety precautions observed when handling the electrostatic-sensitive printed circuit boards.
13. **DAMAGE REQUIRING SERVICE** – Remove power to the unit and refer servicing to qualified service personnel under the following conditions:
  - a. If liquid has been spilled, or objects have fallen into the unit.
  - b. If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
  - c. If the unit has been dropped or the enclosure has been damaged.
  - d. When the unit exhibits a distinct change in performance - this indicates a need for service.
14. **REPLACEMENT PARTS** – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

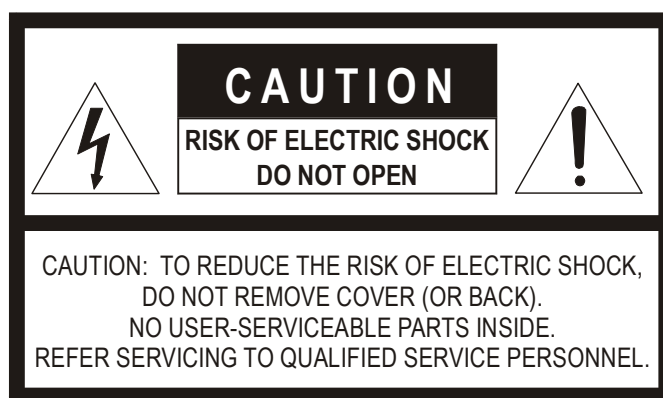
## IMPORTANT SAFEGUARDS, CONTINUED

15. **SAFETY CHECK** - Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.
16. **LIGHTNING** – Surge suppression must be provided for this unit to prevent lightning induced electrical surges. The warranty is void if damage is done to the unit due to electrical surges. For added protection of this unit during a lightning storm, or when it is left unattended and unused for long periods of time, remove power to the unit. This will prevent damage to the unit due to lightning and power-line surges.

## WARNING

- TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.
- THIS IS AN ELECTROSTATIC-SENSITIVE DEVICE. USE PROPER CMOS/MOSFET HANDLING PRECAUTIONS TO AVOID ELECTROSTATIC DISCHARGE.
- TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE GROUNDING PIN (THIRD PIN) ON THE POWER PLUG ON THE POWER SUPPLY.

## CAUTION



## EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the product.

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## SECTION 1: INTRODUCTION

### 1.1 PRODUCT DESCRIPTION

The **KEGS5000** is a controller designed to provide simple operation of Ultrak multiplexers, VCR's, and domes. 16 multiplexers, 16 VCR's and 256 domes can be controlled via the KEGS5000's 2 serial ports. All functions of the individual units are supported remotely and intelligently.

### 1.2 FEATURES

The KEGS5000 controller includes the following features:

- Integrated control of Multiplexers, VCRs, and Domes.
- Remote control of up to 16 Ultrak VCRs.
- Remote control of up to 16 Ultrak multiplexers.
- Control of up to 256 Ultrak domes.
- Icons for universal intuitive operation
- LCD Display
- User programmable macros
- Separate logins for Operators and Master Users (supervisors)
- Supported Ultrak VCRs: KR4XXXXX Series
- Supported Multiplexers: KX16XXCX series, KQ7300CX, KX04XXCX and KX09XXCX

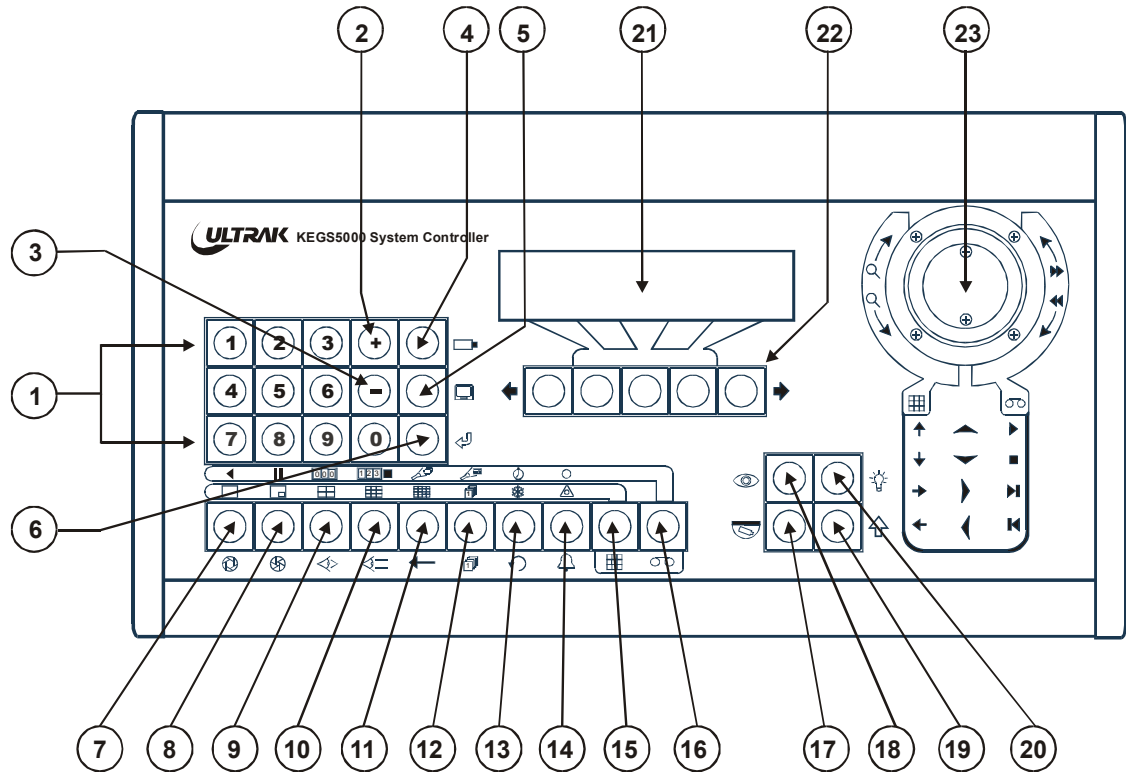
### 1.3 ADDITIONAL INFORMATION

The KEGS5000 controller offers menus in 4 languages: English, Afrikaans, Deutsch, Polski, Espanol, Italiano. Refer to on navigating through menus, then see section 5.3, General Menu for instructions on selecting the language.

USERS OF THE PRODUCT ARE RESPONSIBLE FOR CHECKING AND COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND STATUTES CONCERNING THE MONITORING AND RECORDING OF VIDEO AND AUDIO SIGNALS. ULTRAK SHALL NOT BE HELD RESPONSIBLE FOR THE USE OF THIS PRODUCT IN VIOLATION OF CURRENT LAWS AND STATUTES.

## SECTION 2: CONTROLS AND CONNECTIONS

### 2.1 LOCATION OF CONTROLS



























**Figure 1: Controls of the KEGS5000**







**Note:** Where possible the key is marked with an icon. Refer to the table for descriptions.

ID	Icon	Usage	Description
1		<b>Numeric Keypad</b>	Used to enter numbers in programming screens and entering camera numbers, monitor numbers, and other device numbers.
2	+	<b>Plus Key</b>	Used to select the next camera, multiplexer, or VCR
3	-	<b>Minus Key</b>	Used to select the previous camera, multiplexer or VCR
4	📺	<b>Camera Key</b>	Used to select the camera to be routed to the SPOT monitor.
5	🖥️	<b>Monitor Key</b>	Used to select the spot monitor of a different multiplexer.
6	↵	<b>Enter Key</b>	Used to confirm a selection or select a menu.

## 2.1 LOCATION OF CONTROLS, CONTINUED

ID	Icon	Usage	Description
7-14		Keys 7 to 14 operate in three different modes: Normal, Multiplexer and VCR. <ul style="list-style-type: none"> <li>To lock the controller in Multiplexer mode, press the Multiplexer key twice.</li> <li>To lock the controller in VCR mode, press the VCR key twice.</li> </ul> The LED lights to show the mode of operation.	
7		Refer to Description by Mode	<b>Normal:</b>  Iris Open <b>Multiplexer:</b>  Full-Screen Display <b>VCR:</b>  Reverse Play
8		Refer to Description by Mode	<b>Normal:</b>  Iris Close <b>Multiplexer:</b>  Picture-in-Picture (PIP) <b>VCR:</b>  Pause
9		Refer to Description by Mode	<b>Normal:</b>  Focus Near <b>Multiplexer:</b>  2 x 2 Multi-Screen Display <b>VCR:</b>  Counter Reset
10		Refer to Description by Mode	<b>Normal:</b>  Focus Far <b>Multiplexer:</b>  3 x 3 Multi-Screen Display <b>VCR:</b>  Counter Memory Stop
11		Refer to Description by Mode	<b>Normal:</b>  Clear/ESC Button <b>Multiplexer:</b>  4 x 4 Multi-Screen Display <b>VCR:</b>  Index Search
12		Refer to Description by Mode	<b>Normal:</b>  Sequence <b>Multiplexer:</b>  Sequence <b>VCR:</b>  Time Date Search
13		Refer to Description by Mode	<b>Normal:</b>  Flashback. <b>Multiplexer:</b>  Freeze <b>VCR:</b>  Time Mode
14		Refer to Description by Mode	<b>Normal:</b>  Alarm <b>Multiplexer:</b>  Live Record <b>VCR:</b>  Record

## 2.1 LOCATION OF CONTROLS, CONTINUED

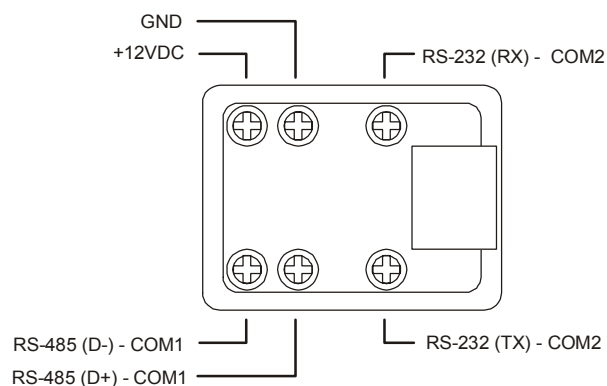
ID	Icon	Usage	Description
15		<b>Multiplexer</b>	<p>Used to place the controller into the multiplexer control mode.</p> <ul style="list-style-type: none"> <li>Press this key once to allow a single command to be sent to the multiplexer before reverting back to the SPOT monitor. (LED will flash.)</li> <li>Press this key twice to lock the controller in the multiplexer mode. (LED will remain lit.)</li> <li>To go back to SPOT monitor, press the key again. (LED will not be lit.)</li> </ul>
16		<b>VCR</b>	<p>Used to place the controller into the VCR control mode.</p> <ul style="list-style-type: none"> <li>Press this key once to allow a single command to be sent to the VCR before reverting back to the SPOT monitor. (LED will flash.)</li> <li>Press this key twice to lock the controller in the VCR control mode. (LED will remain lit.)</li> <li>To go back to SPOT monitor, press the key again. (LED will not be lit.)</li> </ul>
17		<b>PTZ/Dome Call</b>	Used to select the associated PTZ and PreShot for the current camera.
18		<b>View</b>	Used to recall a preprogrammed view or PreShot on the current dome or PTZ.
19		<b>Alternate</b>	<ul style="list-style-type: none"> <li>Used as a shift key.</li> <li>Holding this down and then pressing the view key will save a PreShot.</li> <li>In the Diamond Setup Menus, the alternate key is used to move the text around the screen. Hold the key down, then move the joystick to move the text.</li> </ul>
20		<b>Auxiliary</b>	<ul style="list-style-type: none"> <li>Used to toggle the backlight compensation of the KD6 dome ON or OFF.</li> <li>In the KD6 Setup menus, used to enter text.</li> </ul>
21		<b>LCD Display</b>	2 lines with 16 characters each give operator feedback and (in conjunction with the Soft Keys (22)) provide dynamic menus. See Section 2.4.
22		<b>Soft Keys</b>	Used in conjunction with the LCD display to provide dynamic menus. Additional commands for each device are accessible through these soft keys. See Section 2.4.

## 2.2 JOYSTICK CONTROL

ID	Usage	Description
23	Joystick	Use varies based on the mode of the controller.
		<b>Normal:</b> Provides 3-axis proportional control of the current dome or PTZ.
		Mimics the cursor keys on the multiplexer: <ul style="list-style-type: none"> <li>The twist zoom control mimics the ZOOM key of the multiplexer.</li> <li>In a setup menu, the zoom control mimics the SET key on the multiplexer</li> </ul>
		Used to control the VCR: <p><b>VCR:</b></p> UP = PLAY DOWN = STOP RIGHT = FAST-FORWARD LEFT = REWIND

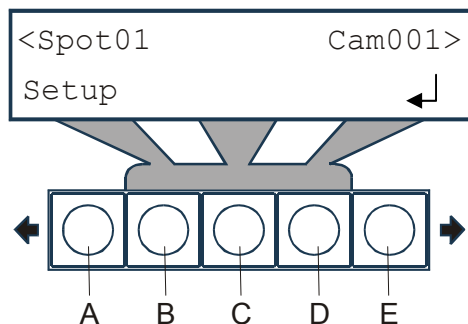
## 2.3 CONNECTIONS

	Description
<b>Power Supply</b>	The KEGS5000 can be powered from a DC power supply with a voltage range of 8-15V 500mA.
<b>COM1 (RS485 output port)</b>	Used for controlling Ultrak KD6 and KD6-Z series domes.
<b>COM2 (RS232 serial port)</b>	Used for controlling Ultrak multiplexers and VCR's. <b>NOTE:</b> The software supports up to 16 multiplexers and 16 VCR's however only 4 devices can be connected to the RS232 port. Should more devices need to be connected a RS232 buffer device must be used.



## 2.4 LCD AND USE OF SOFT KEYS

### LCD



**NOTE:** The gray lines indicate the associated text for each button. In Figure 2, Setup is associated with the B button.

Figure 2: LCD and Soft Keys

### Soft Keys

ID	Icon	Usage	Description
A	←	LEFT ARROW	Use to move between menu items.
B		LEFT CENTER BUTTON	Used to select option shown on the left side of screen. (In the figure above, it would be used to select Setup.)
C		CENTER BUTTON	Used to select option shown on the center of screen. (In the figure above, no option is available at this position.)
D		RIGHT CENTER BUTTON	Used to select option shown on the right side of screen.
E	→	RIGHT ARROW	Use to move between menu items.

Once inside the menus, use the **ENTER** key (↵) to select the menu. Navigation of the menus will now be via soft keys and the joystick.

When selecting sub-menus, the LCD will display the **Menu Name**, **Menu Number**, and additional options. In the example below, the menu is the Multiplexer Menu and is Menu 1. The **"MORE"** in the bottom left corner indicates that there are further options to be reached using the joystick.

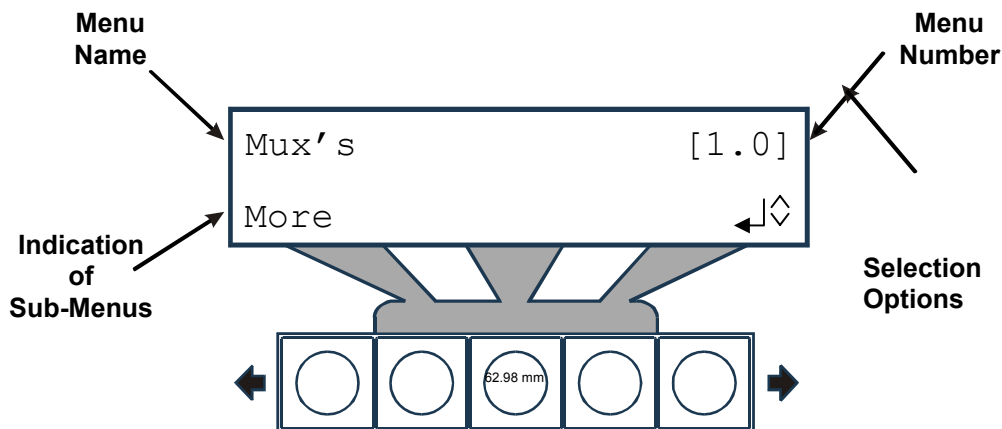
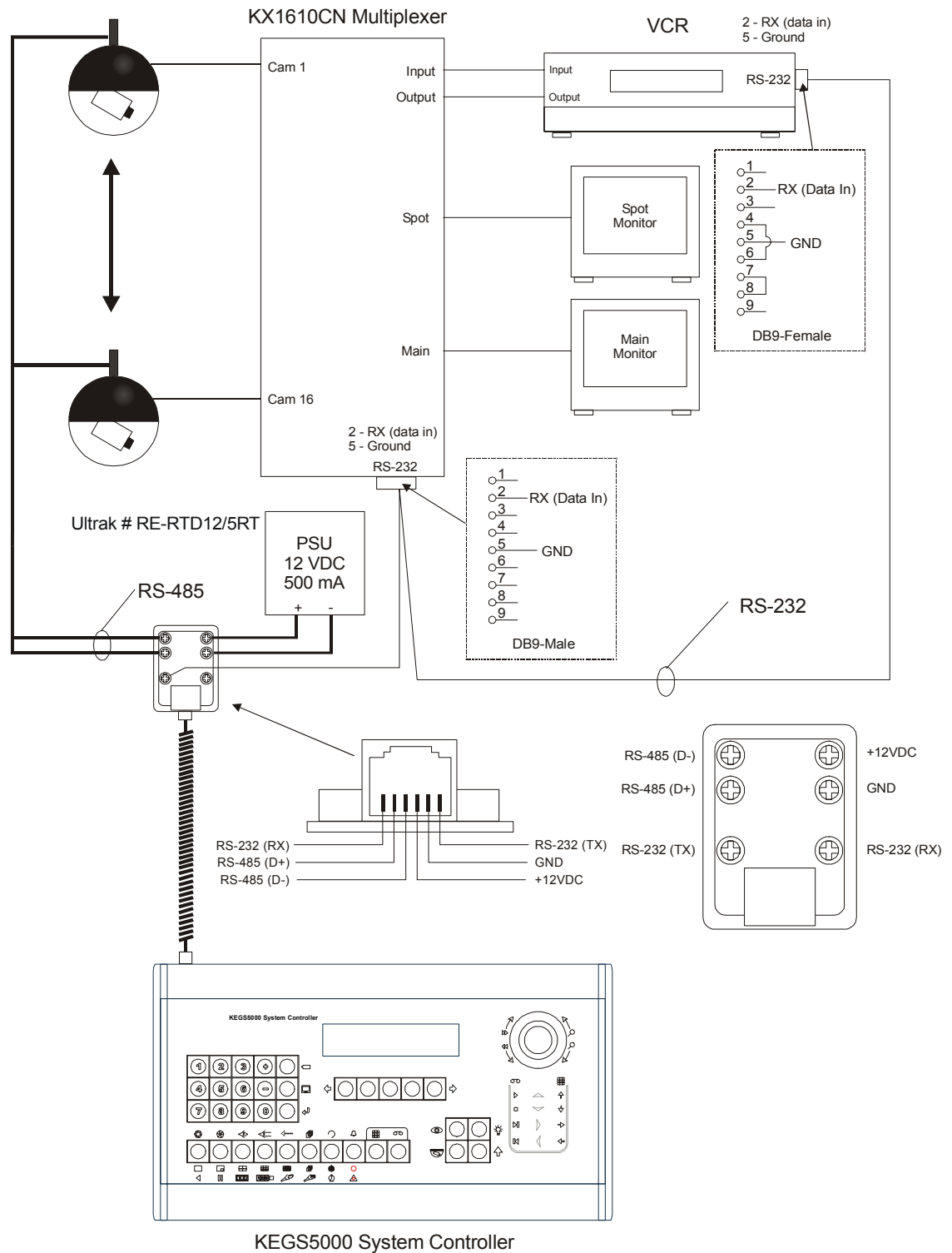


Figure 3: Information Displayed on the LCD

## SECTION 3: INSTALLATION AND SETUP

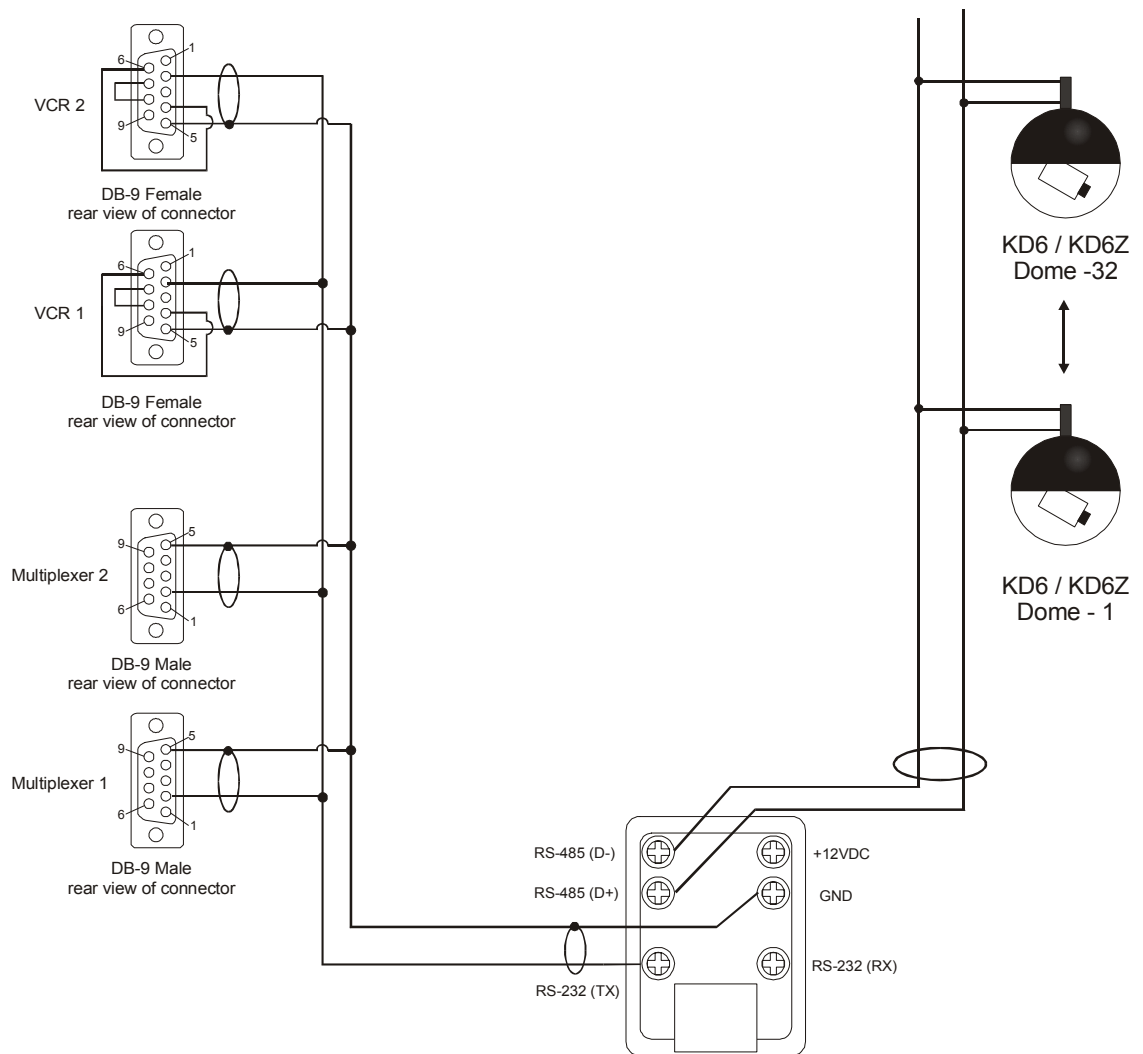
### 3.1 INSTALLATION DIAGRAMS



**Figure 4: Installing the Ultrak Multiplexer, VCR, and Domes.**

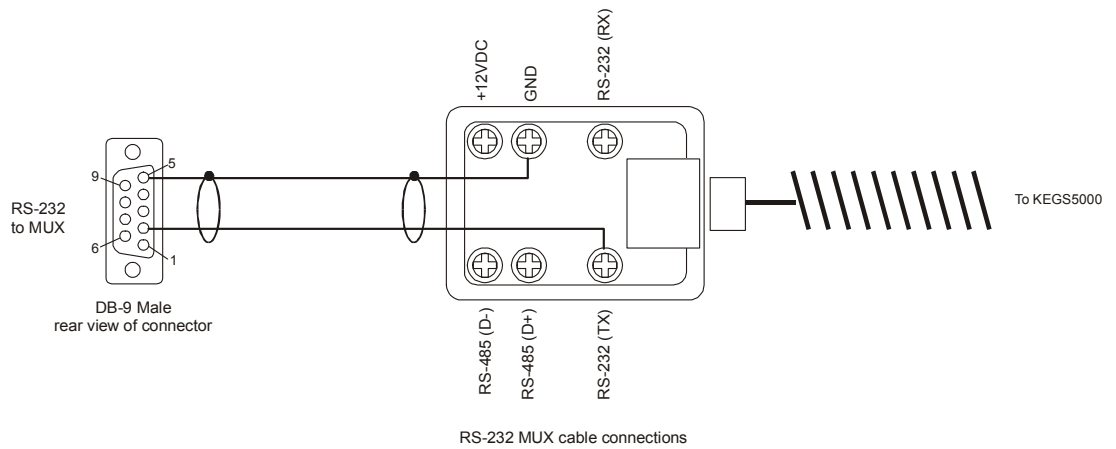
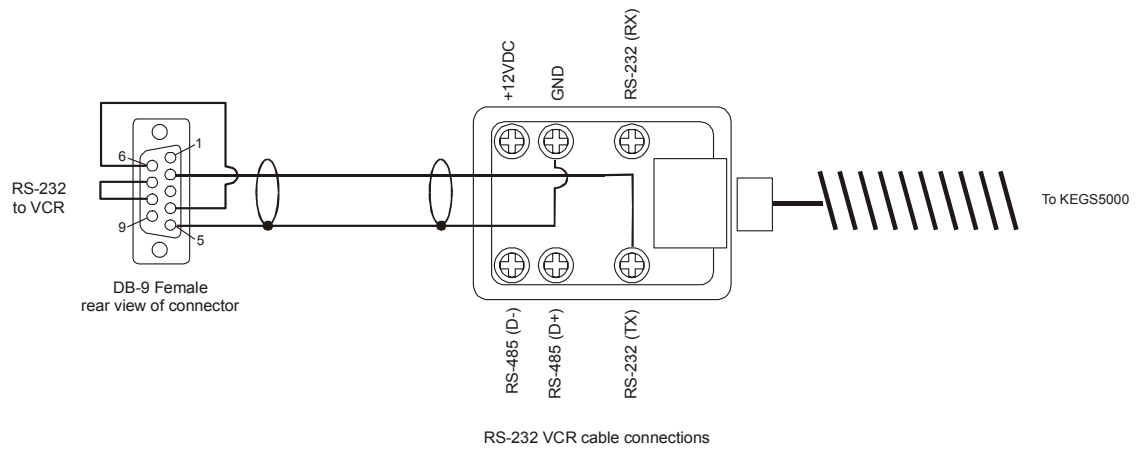


### 3.1 INSTALLATION DIAGRAMS, CONTINUED



**Figure 5: Connection Diagram 1**

### 3.1 INSTALLATION DIAGRAMS, CONTINUED



**Figure 6: Connection Diagram 2**

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## 3.2 SETUP

---

**KD6 Setup**      The KD6 Dome must be set to operate in the MaxPro mode.  
DIP switch S4 must be set as follows.

<b>S4-1</b>	ON
<b>S4-2</b>	OFF
<b>S4-3</b>	OFF
<b>S4-4</b>	OFF

Refer to the UltraDome KD6 Operation and Programming manual (Ref 518584-2960) for more details.

The address of the KD6 and KD6Z dome must be set to match that set in the KEGS5000.

---

**Multiplexer Setup**      The multiplexer should be set up as follows:

<b>Coms</b>	RS-232
<b>Baud</b>	1200

The address of the multiplexer with cameras 1-16 must be set at 1, cameras 17-32 set at 2.  
See the multiplexer user manual for more details.

---

**VCR Setup**      The VCR address is set to NONE as the default. To function properly, VCR 1 must be set to address 1 and VCR 2 to address 2. See the user manual for more details.

## SECTION 4: OPERATION

### 4.1 USING THE CONTROLLER

After powering up the KEGS5000, the LCD display enters a mode which allows the controller to either test the unit or upload a new version of the software into the unit.

- Press **1** to enter the menu and download new software.
- Press **2** to enter the key test mode.
- Press **3** to enter the joystick mode.

After 5 seconds, the current application starts and the login screen displays. Two modes of operation are available: **Master** and **Operator**. Enter the four-digit password to logon.

**Default Password**      Default password for the Master is 1994.  
Default password for the Operator is 1111.

**Master** Mode has access to all menus. **Operator** Mode allows access to all menus except those in which changes to system setup are involved. The table below shows which menus and functions are available for each mode.

Description	Operator	Master
Save PreShot (View) on KD6-Z and KD6 domes [Alt] + [View] or [Save View]	PreShots 1-10 only	Yes
Recall PreShot (View) on KD6-Z and KD6 domes [View]	Yes	Yes
Programming the Vectors can menu – KD6-Z and KD6 dome [Vestment]	No	Yes
Running a preprogrammed VectorScan – KD6-Z and KD6 dome [VectMnu]	Yes	Yes
Programming the tour menu – KD6 dome [Tour]	No	Yes
Running a tour – KD6 dome [Tour]	Yes	Yes
Night shot on/off – KD6 [NightS]	Yes	Yes
Auto iris on/off – KD6 [Autolrs]	Yes	Yes
Programming a sector – KD6 [SectMnu]	No	Yes
Programming a privacy zone – KD6 [SectMenu]	No	Yes
Access to the menu – KD6 dome [MainMnu]	No	Yes
Access to the system Setup menu [Setup]	No	Yes
Access to the Multiplexer setup menu	No	Yes

## 4.2 SPOT MONITOR OPERATION

Use the LEFT and RIGHT arrow keys below the LCD display to cycle through the different soft keys for each camera type.

By default, Cam001 is defined as a KD6 and Cam002 is defined as a KD6-Z.

The Spot Monitor operates in two modes: Absolute and Relative

### Absolute Mode

In this mode the camera number is displayed and selected by a number in the range 1 to 48. Cameras 1 to 16 are from the first multiplexer, 17 to 32 the second, and so on. The multiplexer to be controlled is automatically calculated and indicated by the number after SPOT. Absolute mode is indicated by displaying the camera number as 3 digits (i.e., 012).

**Example:** Routing a camera to the spot monitor of multiplexer 1: Example camera 12.

 1 2  OR 1 2 


<Spot01 Cam012>  
Save View

 2 0  OR 2 0 

<Spot02 Cam020>  
Save View

Note that SPOT now indicates that multiplexer 2 is selected.

### Relative Mode

In this mode the camera number is displayed and selected by a number in the range 1 to 16. The multiplexer selected will be the default multiplexer indicated next to SPOT. To select a camera from a different multiplexer use the MONITOR key (  ) to select a different multiplexer. Relative mode is indicated by displaying the camera number with an asterisk in front of the number (i.e., \*12).

**Example:** To route camera 1 on multiplexer 3 do the following:

Make sure the controller is in the Relative mode. Press   if not.

 3  followed by  1 

OR

3  followed by 1 

<Spot03 Cam\*01>  
Save View

## 4.2 SPOT MONITOR OPERATION, CONTINUED

### Moving between Absolute and Relative Modes


To toggle between Absolute and Relative modes press the **CAM** () key twice quickly.



<Spot02 Save View	Cam*04>
----------------------	---------

The SPOT still shows the multiplexer number while the CAM shows the input of that multiplexer with an asterisk in front of the number.

**TIP:** Press **+** and **-** to select the next or previous camera.

**TIP:** Press  followed by **+** to select the next spot monitor.

## 4.3 PTZ OPERATION

Use the joystick to control the camera.

### View/PreShot Recall

The first 10 PreShots (Views) are available as scratchpad PreShots. These can be saved and recalled by the operator. PreShots (Views) 11-79 can only be recalled by the operator and not saved.

To recall a PreShot or view, press **VIEW** () [number] **OR** [number] .

**Example:** To recall view 5, press  5  **OR** 5 .






### View/PreShot Save

To save a PreShot or view, press [**Save View**] [number] **OR** [number] [**Save View**].

**Example:** To save view 5, press [**Save View**] 5  **OR** 5 [**Save View**].

**NOTE:** To save PreShots 11-99 you have to log in as a **Master User**.




**TIP:** Pressing and holding **ALT** () then pressing **VIEW** will also save a PreShot.


**Example:** To save view 5, press and hold **ALT** () then press  5  **OR** 5  .

---

## 4.3 PTZ OPERATION, CONTINUED



---

**Run VectorScan** To run a VectorScan use the  or  arrows to scroll through the dynamic menus until the [Vector] menu is visible. Press [Vector] [Run] [number] .


**Example:** To run vector 2, press [Vector] [Run] [2] .


To stop a VectorScan, move the joystick when the camera is active.

---




**Program a VectorScan.** Use the  or  arrows to scroll through the dynamic menus until the [Vector] menu is visible. Press [Vector] [Program].

**(Only available through Master password)** The Program VectorScan menu appears. Refer to the KD6 operation & programming manual (518584-2960). for more details. All commands needed to navigate the on-screen menus are available through the LCD dynamic menus.





**TIP:** To move text around the screen press and hold ALT () then use the joystick to move the text.

**TIP:** To enter text into a menu, such as the name of a PreShot, press the AUX () . This enter a text mode on the LCD display. Use the joystick to scroll through the available letters. Press Enter to send the text to the KD6.

---

**Run a Tour (KD6 Only)** To run a Tour use the  or  arrows to scroll through the dynamic menus until the [Tour] menu is visible. Press [Tour] [Run] [number] (1-3) .

---

**Program a Tour.** Use the  or  arrows to scroll through the dynamic menus until the [Tour] menu is visible. Press [Tour] [Program]. (Use the  or  arrows to scroll through options until [Program] is visible.)

**(Only available through Master password)** Select the number of the tour to program (1-3) and press [Enter].



Use the joystick to move the KD6 over the desired tour. The length of the tour can be a maximum of 120 seconds.

Press [TourStp] on the dynamic menu to end the tour.

---



## 4.3 PTZ OPERATION, CONTINUED

### Nightshot (Specific KD6 Models Only)


To toggle between standard operation and nightshot, use  or  to scroll through the dynamic menus until the [Nightshot] menu is visible. Press [Nightshot]. No obvious change to the screen is seen.)


As noted, this applies only to KD6 Models CA470S4N, CA470S4P, CA480S4N, and CA480S4P.



### Accessing the KD6 PreShot menu.

Use the  or  arrows to scroll through the dynamic menus until the [PreShotMnu] menu is visible. Press [PreShotMnu] to bring up the on-screen-display. Refer to the KD6 Operation and Programming Manual (518584-2960) for more details. All commands needed to navigate the on-screen menus are available through the LCD dynamic menus.

### (Only available through Master password)



**TIP:** To move text around the screen press and hold ALT () then use the joystick to move the text.

**TIP:** To enter text into a menu, such as the name of a PreShot, press AUX (). This enters a text mode on the LCD display. Use the joystick to scroll through the available letters. Press **Enter** to send the text to the KD6.

Use the **ESC** () key to exit any menu. Once out of the on-screen-menu, press ESC () twice to exit the Dynamic menus and return to controlling the dome.

## 4.4 ACCESSING KD6 MENUS

### Accessing the KD6 menu

To access the KD6 menu you must be logged in as a **Master** user. Use the  or  arrows to scroll through the dynamic menus until the [MainMnu] is visible. Press [MainMnu] to display the KD6 menu on the monitor.



To select a setup menu, press the number beside the option.

The numbers either toggle between the available choices or call up another menu.

UltraDome KD6  
518584-2980 Rev M

1 Language.....English  
2 Display Options  
3 Control Options  
4 Diagnostic Options  
5 Camera Options  
6 Function Programming  
ESC TO EXIT


### Exiting a KD6 menu

Use the **ESC** () key to exit any menu. Once out of the on-screen-menu. Press ESC () twice to exit the Dynamic menus and return to controlling the dome.




## 4.4 ACCESSING KD6 MENUS, CONTINUED

### Moving the position of text



In a number of menus, there is the option of moving the location of the on-screen-text. When prompted to use the Up, Down, Left, Right arrow keys by the on-screen-display within a KD6 menu. Hold the **ALT** () key down and use the joystick to move the position of the text to the desired location.

### Moving the position of the cursor within a KD6 menu

In a number of menus, the location of the cursor needs to be moved. When prompted to use the Up, Down, Left, Right arrow keys by the on-screen-display within a KD6 menu. Hold the **ALT** () key down and use the joystick to position the cursor at the desired location.

### Entering text into a KD6 menu


In a number of menus, there is the option of adding text information.


When prompted to enter a name press the **AUX** () . The LCD display changes to a text mode. Use the joystick **UP** and **DOWN** to scroll through the letters of the alphabet. Once the character is selected, move the joystick to the right to move the cursor to the next character. Use the joystick to select the next character. Once the text has been entered press **[Enter]** () key to send the text to the KD6.

**NOTE:** For more details on the operation of the KD6 dome and for the latest features refer to the KD6 operation & programming manual (518584-2960).

## 4.5 VCR CONTROL


The KEGS5000 controller sends basic commands to the VCR.  
Refer to the VCR User Manual for details on the operation of the VCR.

To lock the controller into the VCR mode, press the **VCR** () button twice.  
The LED will indicate that the controller is now in the VCR mode.













Use the joystick and keys 7-14 to control the VCR. To select a different VCR, use the  key or press **+** or **-** to move between VCRs.

### Example:

To select VCR 2, press  2  **OR** 2 .

To exit the VCR mode, press .


## 4.5 VCR CONTROL, CONTINUED

ICON	KEY	DESCRIPTION
	VCR	Places the controller into the VCR mode. Press once to send a single command (LED will flash). Press twice to lock in VCR mode (LED will stay lit).
	Joystick	The LEFT, RIGHT, UP, and DOWN directions of the joystick mimic the VCR tape controls.  UP = PLAY DOWN = STOP RIGHT = FAST-FORWARD LEFT = REWIND
	Rewind	Twist the joystick RIGHT to REWIND.
	Fast Forward	Twist the joystick LEFT to FAST FORWARD.
	Reverse Play	Play tape in reverse at regular speed.
	Pause	Pause tape playback.
	Counter Reset	Reset VCR counter.
	Counter Memory Stop	Stop VCR counter to mark location for memory.
	Index Search	Allows an index number to be searched for both in the forward or reverse direction.
	Time and Date Search	Allows an exact time and date to be search for in both the forward and reverse direction
	Time Mode	Allows the time mode of the VCR to be selected when logged in as a Master user.
	Record	Activate recording on VCR.












## 4.6 MULTIPLEXER CONTROL

The KEGS5000 controller sends basic commands to the multiplexer to simulate pressing the buttons on the front panel of the multiplexer. The SELECT, REVIEW, SET, and MENU buttons are soft keys available through the LCD display.

Refer to the Multiplexer User Manual for details on the operation of the multiplexer.

To lock the controller into the Multiplexer mode, press the MULTIPLEXER () button twice. The LED will indicate that the controller is now in the Multiplexer mode.

Use the joystick and keys 7-14 to control the multiplexer.

ICON	KEY	DESCRIPTION
	Multiplexer	Places the controller into the Multiplexer mode.
	Multiplexer Zoom	Twist the joystick RIGHT to zoom in and LEFT to zoom out. In Multiplexer Menu, this key acts as the SET button.
	Multiplexer Cursor	The LEFT, RIGHT, UP, and DOWN directions of the joystick mimic the multiplexer cursor keys.
	Full Screen	Places the Multiplexer into full screen mode.
	Picture-in-Picture	Places the Multiplexer in picture-in-picture (PIP) mode.
	2 x 2 Display	Places the Multiplexer into 2 x 2 mode.
	3 x 3 Display	Places the Multiplexer into 3 x 3 mode.
	4 x 4 Display	Places the Multiplexer into 4 x 4 mode.
	Sequence	Places the Multiplexer into Sequence mode. Select sequence 1 or 2 from the soft menus.
	Freeze	Places the Multiplexer into Freeze mode.
	Live Record	Not used on version 2.0

**TIP:** To Enter different cameras into a multi-view. Press the Select dynamic button off the LCD display and then enter each camera number followed by the Camera button

## SECTION 5: PROGRAMMING

### 5.1 SETTING UP THE CONTROLLER

Definition of the components controlled by the KEGS5000 can be done via the SETUP MENU. This menu is available only when logged in as a **Master** User.

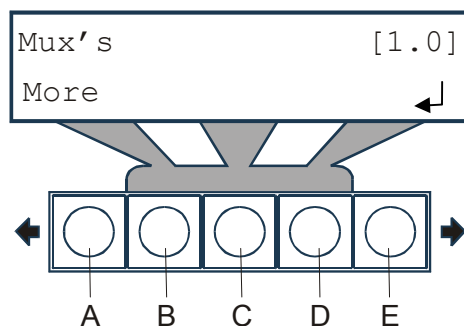
- The SETUP MENU is in tree structure.
- Several tools, including the **LEFT** (←) and **RIGHT** (→) keys, **ENTER** key (↵), and **UP** (↑) and **DOWN** (↓) options on the joystick are used to navigate through the menus.
- Press **ENTER** (↵) to select an option and go down one level.
- Press **ESC** (←) to go back one step/up one level.

### 5.2 NAVIGATING THE MENUS

The LCD screen will indicate the level, menu name, and additional options.

Using the figure, the LCD shows that we are at the Multiplexer Menu, which is menu 1.




The “More” indicates that there are further options or sub-menus available under this menu.






- To select this menu, press ↵.
- To move to another menu, use the joystick control and move the joystick ↑ or ↓. Moving it ↑ will change it menu 2, then menu 3, and so on. You can view the menus in reverse order by moving the joystick ↓.
- If you have selected a menu incorrectly, press **ESC** (←) to return to the previous level.
- Once in a sub-menu, use the joystick or **ENTER** (↵) key to navigate through options.
- To exit the setup menu, use the joystick to choose menu 8 (**EXIT**) or press **ESC** (←) until the setup menu is exited.

## 5.3 MENUS









### Multiplexers

Menu Name	Menu Number	Description
<b>Mux's</b>	<b>1.0</b>	Used to set the type of multiplexer and the number of multiplexers in the system. Press  to access this menu.
<b>Mux type</b>	<b>1.1</b>	<b>Type of Multiplexer</b> – Only one type of multiplexer per system (KX16xxCx, KX16xxMx, KQ7300Cx, KX04xxCx, KX09xxCx supported). Press  .
<b>No. of Muxes</b>	<b>1.2</b>	<b>Number of Multiplexers</b> – One to 16 allowed. Each multiplexer must have the address set at its logical number. Press  .

### Recorders






Menu Name	Menu Number	Description
<b>Recorders</b>	<b>2.0</b>	Used to set the type of VCR and the number of VCR's in the system. Press  to access this menu.
<b>VCR Type</b>	<b>2.1</b>	<b>Type of VCR</b> - Only one type of VCR per system (KR4xxxCx). One to 16 allowed. Press  .
<b>No. of VCRs</b>	<b>2.2</b>	<b>Number of VCR's</b> - Each VCR must have the address set at its logical number. Press  to exit this menu.

## 5.3 MENUS, CONTINUED

Cameras	Menu Name	Menu Number	Description
	Cameras	3.0	Used to set the Type of camera and the address to which the controller will send commands when this camera is selected on the spot monitor. Press  to access this menu.
	Camera Num	3.1	<p><b>Camera Number –</b> Use the number keys or the <b>+</b> and <b>-</b> keys to select the camera number.</p> <p>Once the camera number is selected, press  to move to the next sub-menu.</p>
	(Cam Num) Type	3.1.1	<p>Used to select the type of camera for each camera number. The camera number in parentheses indicates which camera is currently selected.</p> <p>To set camera type, use the <b>+</b> and <b>-</b> keys to select between the four camera types (KD6, KD6-Z, Fixed Camera, and Pan Tilt Head).</p> <p>Press  or  on the joystick to move to the next sub-menu.</p>
	<p><b>TIP:</b> To make it easy to setup all camera TYPES and camera ADDRESSES, start with camera 1 TYPE and simply press <b>ENTER</b> () after setting the type to go to the address. Set the address and press <b>ENTER</b> () to move to the TYPE for camera 2. Continue setting the TYPE and ADDRESS for each subsequent camera until all cameras are done.</p>		
	(Cam Num) Address	3.1.2	<p>Used to set the camera address. The camera number in parentheses indicates which camera is selected.</p> <p>Enter the required address of the camera using the number keys or the <b>+</b> and <b>-</b> keys. For KD6-Z domes, the address must be the same as the value set in menu 5.0 setup.</p> <p>Press  to move to the next camera.</p> <p>Press  to exit this menu.</p>



## 5.3 MENUS, CONTINUED

### KDZ Setup



Menu Name	Menu Number	Description
<b>KDZ Setup</b>	<b>4.0</b>	Used to program the address of any KDZ connected to the KEGS5000. Press  to access this menu.
<b>Serial No.</b>	<b>4.1</b>	Using the number keys, enter the serial number of the KDZ dome. Press  . The serial number is supplied with the dome and is printed on the dome.
<b>KD6-Z Addr</b>	<b>4.2</b>	Enter the required address of the dome using the number keys or <b>+</b> and <b>-</b> keys. Press  .
<b>Set Address</b>	<b>4.3</b>	Press  to confirm the information and send the serial number and address to reprogram the KD6-Z dome. Press  to exit this menu.

**NOTE:** The above setup menu is simply a tool to allow the address of the KDZ dome to be programmed from the controller. This information is not stored in the controller. The address of each KDZ dome can be set one after each other without having to exit this menu.

### Passwords

Menu Name	Menu Number	Description
<b>Passwords</b>	<b>5.0</b>	Press  to access this menu.
<b>Master</b>	<b>5.1</b>	Enter a new 4-digit master password. Once the digits are entered, the password is reset.
<b>Operator</b>	<b>5.2</b>	Enter a new 4-digit operator password. Once the digits are entered, the password is reset. Press  to exit this menu.

### Outputs

Menu Name	Menu Number	Description
<b>Outputs</b>	<b>6.0</b>	An additional multiplexer can be used to combine the monitor outputs of multiple multiplexers to one monitor. Press  to access this menu.
<b>Switch Dev</b>	<b>6.1</b>	<b>Switch Device</b> – Use the <b>+</b> and <b>-</b> keys to select the type of multiplexer used to combine the monitor outputs. Press  to exit this menu.
<b>Address</b>	<b>6.2</b>	Enter the address of the output using the number keys or the <b>+</b> and <b>-</b> keys (001 to 255)

### 5.3 MENUS, CONTINUED

#### General.

Menu Name	Menu Number	Description
<b>General</b>	<b>7.0</b>	Used to deactivate the buzzer or set language options. Press ↵ to access this menu.
<b>Buzzer</b>	<b>7.1</b>	Use the + and - keys to toggle the buzzer ON or OFF. Press ← to exit this menu.
<b>Language</b>	<b>7.2</b>	Use the + and - keys to scroll through the language options. Press ← to exit this menu.

#### Exit

Menu Name	Menu Number	Description
<b>Exit</b>	<b>9.0</b>	Press ↵ to exit the Setup Mode or press ← twice to exit the setup menu.



## 5.4 DOWNLOADING NEW FIRMWARE TO THE KEGS5000

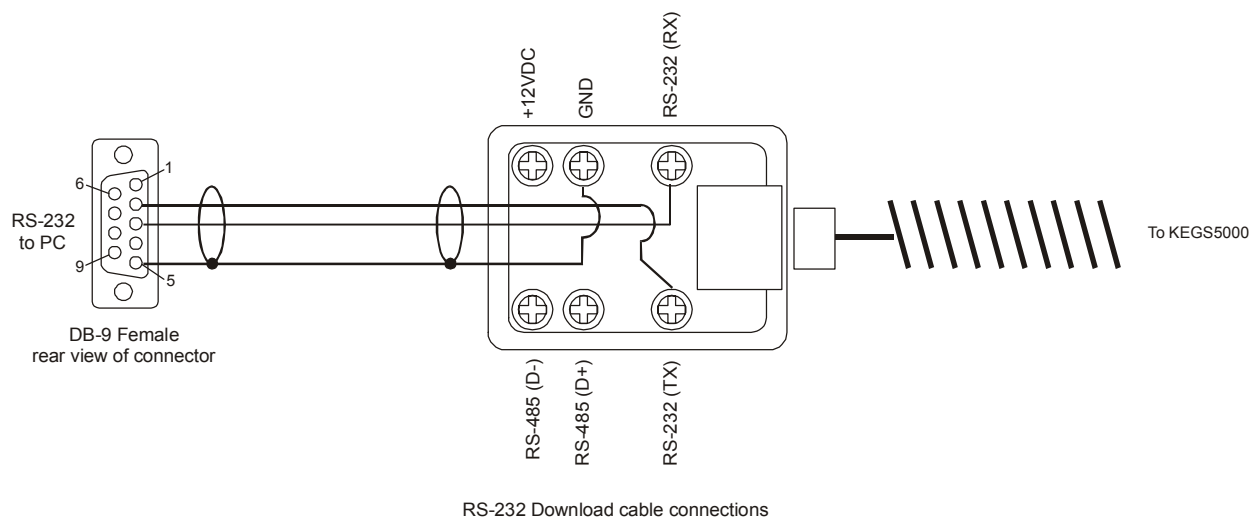
The KEGS5000 can have new firmware downloaded through the RS-232 port. This is done through a simple windows program called Ultrak Code Server.

To download the latest version of the Code Server visit the download section on the Ultrak website ([www.ultrak.com](http://www.ultrak.com)) or go directly to [http://www.ultrak.com/download\\_software.shtm](http://www.ultrak.com/download_software.shtm). Click on CCTV and follow the instructions to download the Ultrak Code Server.

To download the latest version of the KEGS5000 firmware, click the latest version and select "Run from Server." This will open winzip and install the firmware to the default directory (C:\Program Files\Ultrak Code Server\CCTV\KEGS5000). If Code Server was installed to a different drive, select the drive prior to installing.


The latest version will be saved to your computer.

1. Connect the KEGS5000 to COM1 or COM2 of your PC.  
(Refer to the diagrams below for correct download cable connections.)



2. Disconnect power from the KEGS5000. Reconnect the power and, before the timer reaches zero, press **1** on the controller. This will put the controller into the download mode.
3. Enter the **Master** password.  
(Assuming it has not been changed from the default, enter 1994.)
4. Press the **←** or **→** arrow keys until the LCD display shows **Download Firmware**.

## 5.4 DOWNLOADING NEW FIRMWARE TO THE KEGS5000, CONTINUED

5. Press . The controller will clear the memory and, when ready to download, will display the message **"Begin Download."** The KEGS5000 is now waiting for data from the PC.
6. From the START bar on your PC, select Programs→Ultrak→Ultrak Code Server. The following window appears.

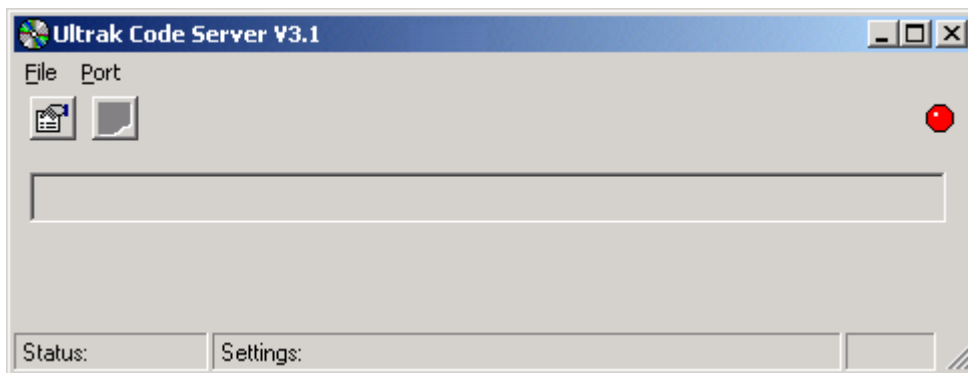



Figure 7: Ultrak Code Server window

7. The Port Properties icon  allows you to select which serial port to use. Clicking on this opens the CommPort Properties window:

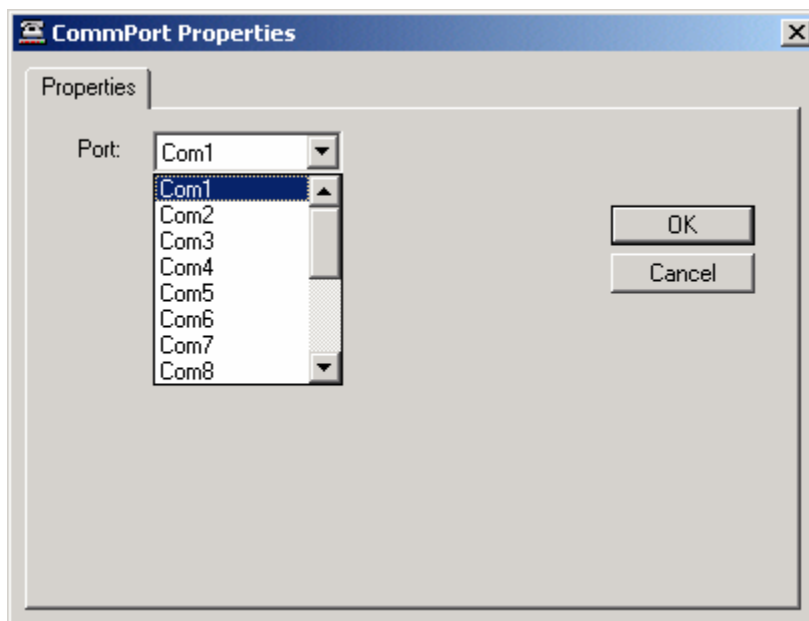
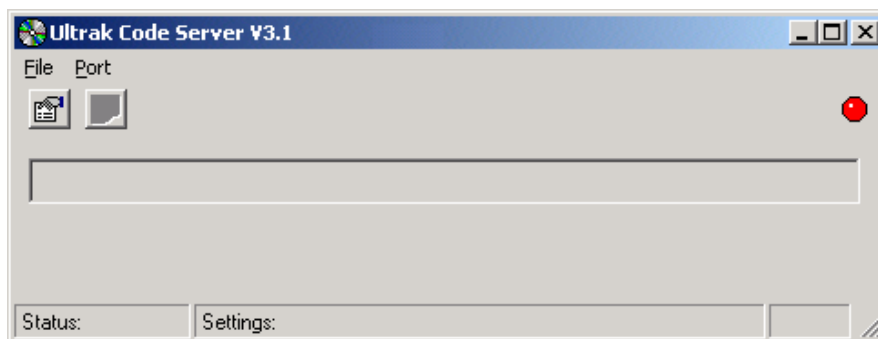


Figure 8: CommPort Properties window

Select the serial port the download adapter is connected to and click OK.

## 5.4 DOWNLOADING NEW FIRMWARE TO THE KEGS5000, CONTINUED

- Click on the red dot to enable the port.



**Figure 9: Enabling the CommPort**

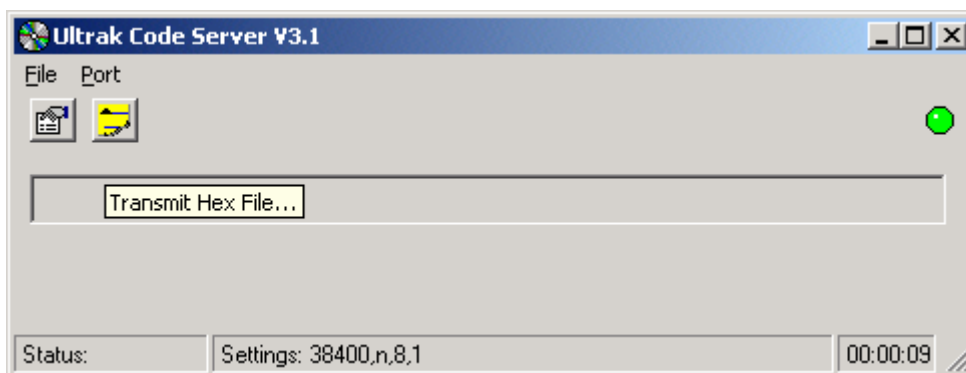
If the port is unavailable, you will get an “Invalid port number” error message.

This is because the port is being used by another device, usually the mouse or a modem. Click on the properties icon and select a different port.



**Figure 10: Invalid Port Error**

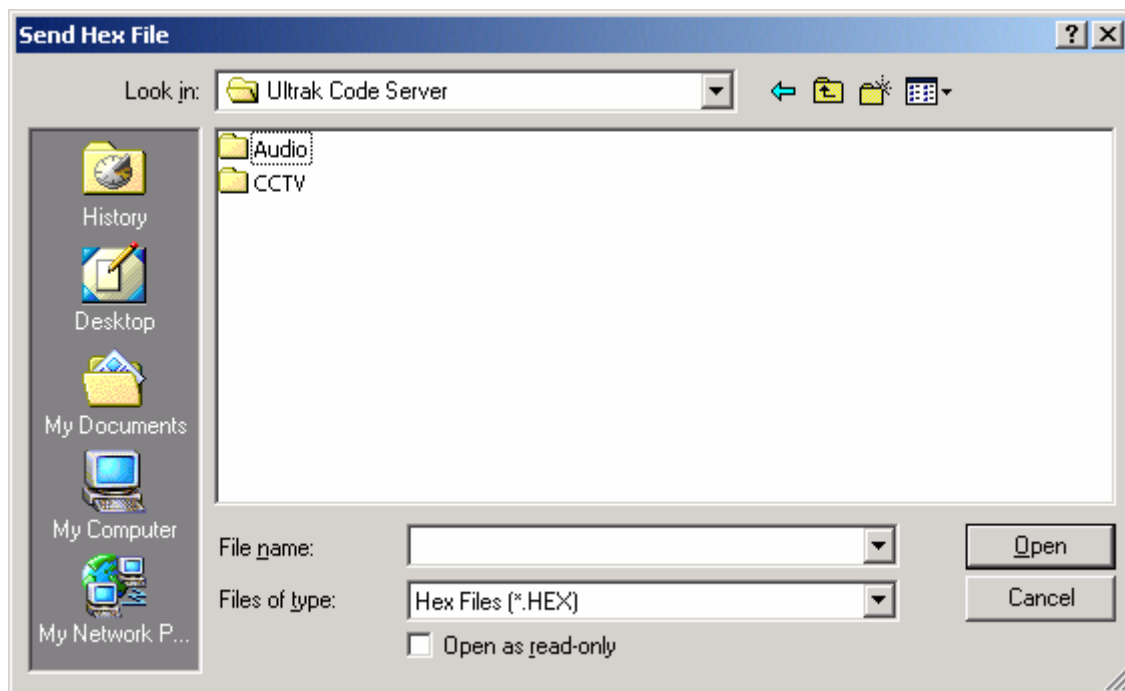
- If the port is available the red dot changes to green and the Transmit Hex file icon becomes visible.



**Figure 11: Transmit Hex File**

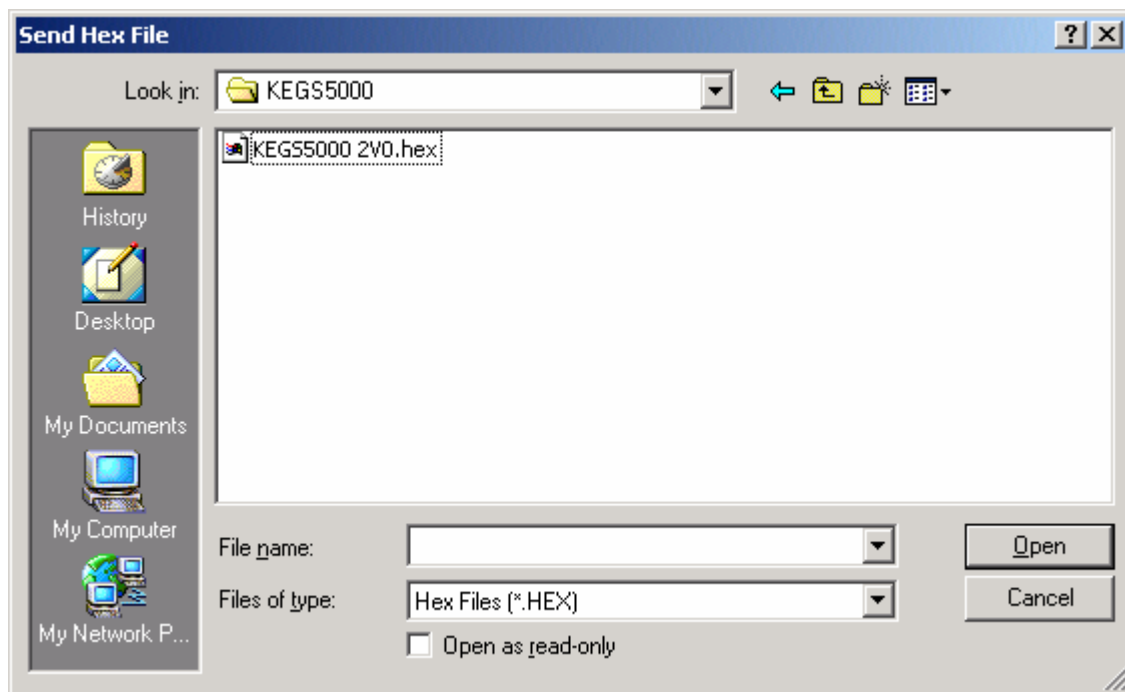
## 5.4 DOWNLOADING NEW FIRMWARE TO THE KEGS5000, CONTINUED

10. Click on the Transmit Hex File icon  to bring up the Send Hex File window.



**Figure 12: Send Hex File window**

11. Double click the CCTV folder and then the KEGS5000 folder.



**Figure 13: Selecting the Hex File to Send**

## 5.4 DOWNLOADING NEW FIRMWARE TO THE KEGS5000, CONTINUED

12. Select the latest version (in this example, KEGS5000 2V0.hex) and click OPEN. The Sending Hex File window displays, indicating the file being transmitted and the progress of the download. “**Download Busy**” appears on the KEGS5000 LCD.

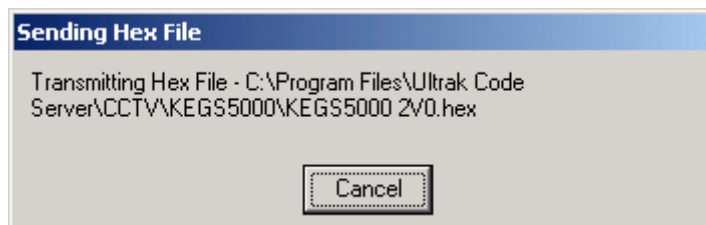


Figure 14: Sending Hex File status window

13. When the download is complete, a **Transfer Complete** window will display and the KEGS5000 will restart with the new version of the software.

Click OK to close the Ultrak Code Server.

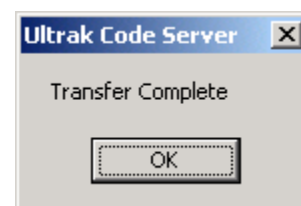


Figure 15: Transfer Complete

## **SECTION 6: TROUBLESHOOTING AND MAINTENANCE**

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### **6.1 TROUBLESHOOTING**

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If problems occur at the initial installation phase, verify the unit is installed correctly and the connectors are seated fully into the interconnecting equipment. Because this unit is just one part of an overall system, it may be necessary to verify that the other equipment types have been installed and are operating correctly before assuming the problem exists with the KEGS5000 controller.

If problems still exist after verifying correct installation and the problem has been isolated to the controller, then it must be removed for servicing. THERE ARE NO USER-SERVICEABLE PARTS. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

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### **6.2 PREVENTIVE MAINTENANCE**

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Use of preventive maintenance allows detection and correction of minor faults before they become serious enough to cause equipment failure. As a result, major repairs can be avoided, and the equipment can be maintained in an operable condition with a minimum of maintenance.

Periodically perform the following.

1. Inspect all interface connecting cabling for deterioration or other damage.
2. Clean the front panel with a soft cloth using any mild commercial cleaner.

NOTES:

## SECTION 7: SPECIFICATIONS

<b>Input Voltage</b>	9-12V dc
<b>Power</b>	6W
<b>Controls</b>	Push-button switches with backlit LCD display Rate-proportional 3-axis joystick
<b>Pan/Tilt Functions</b>	Pan left, Pan right, Tilt up, Tilt down
<b>Zoom Lens Functions</b>	Zoom in, Zoom out, Focus near, Focus far, Iris open, Iris close
<b>Control Ports</b>	RJ-11 connector with 1xRS-485 and 1xRS-232 port
<b>Communication Speed</b>	RS-232: 1200 baud RS-485: 9600 baud
<b>Control Output Modes</b>	RS-232 for Multiplexers and VCRs RS-485 for Domes and PTZs
<b>Operating Distances</b>	4000 ft (219 m) with RS-485 and 32 devices 50 ft (12.7m) maximum with RS-232
<b>Ambient Temperature</b>	32°F to 122°F (0°C to 50°C)
<b>Ambient Humidity</b>	0~95% (non-condensing)
<b>Construction</b>	Extruded aluminum
<b>Finish</b>	Light gray powder coating
<b>Dimensions</b>	13W x 3.75H x 6.875D inches (330W x 95H x 175D mm)
<b>Weight</b>	3 lbs. (1.36kg)



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